

ABSTRACT

Pan, tilt and zoom sensors are coupled to a broadcast camera in order to determine the field of view of the broadcast camera and to make a rough estimate of a target's location in the broadcast camera's field of view. Pattern recognition techniques can be used to determine the exact location of the target in the broadcast camera's field of view. If a preselected target is at least partially within the field of view of the broadcast camera, all or part of the target's image is enhanced. The enhancements include replacing the target image with a second image, overlaying the target image or highlighting the target image. Examples of a target include a billboard, a portion of a playing field or another location at a live event. The enhancements made to the target's image can be seen by the television viewer but are not visible to persons at the live event.